

XXXIII. *On the Species of Depressaria, a Genus of Tineidæ, and the allied Genera Orthotælia and Exæretia.*
By H. T. STAINTON, Esq.

[Read Dec. 4th, 1848.]

THE genus *Depressaria* is one of the most natural we have, and considering the variety of size in the different species, their extraordinary similarity of appearance is not a little remarkable. The food of the larvæ is very various, some of them feeding on the leaves of composite plants, others, and by far the greater portion, in the umbels or on the seeds or leaves of different species of Umbelliferæ; again, the larvæ of two species feed on the sallow, whilst the *Hypericum perforatum* affords a pabulum to another species.

NOTE.—The species marked † have not yet been detected in this country.

ORTHOTÆLIA, Stephens.
CAULOBUS, Duponchel.
HÆMYLIS, Zeller.
AGONIOPTERYX, Treitschke.

Sparganiella, Thunb., Tr., D., Z.
Tostella, Hüb. 456.
Venosa (*Depressaria*), Haworth.
Venosa (*Orthotælia* and *Depressaria*), Stephens.

The larvæ of this insect feeds, as the name implies, on a *Sparganium*, but there is some dispute as to which of the species: Treitschke says *simplex*, Zeller says *ramosum*, not *simplex*. I have met with the perfect insect myself among *Sparg. ramosum*, and Mr. Edward Doubleday has reared it from larvæ found in the stems of this latter plant, in July: he states that the presence of the larvæ is easily detected by the withering of the flowers. The perfect insect appears at the end of July and beginning of August.

Duponchel states that it feeds on *Sparganium natans*; Guenée has, according to Duponchel, found the larvæ of this species at the base of the leaves of the *Iris pseudacorus*, but I am inclined to fancy that this is a distinct species, especially as it appears by Mann's Catalogue that another species, which he there calls "*Palustrella*, Tr. in litt.," occurs on the continent. I am not aware that this species has been described; it probably occurs in this country and needs but to be sought.

EXÆRETIA, nov. gen.

Caput lævigatum. Palpi recurvati, articulo secundo infra setis instructo, articulo terminali acuto. Antennæ mediocres. Alæ anteriores latæ; ante apicem aliquantulum contractæ; cilia brevía, ad marginem posteriorem emarginata. Alæ posteriores elongatæ, ovales, emarginatæ ad angulum anale; cilia brevía. Abdomen depressum.

This genus is intermediate between the *Stenoma* of Zeller (an exotic genus) and *Depressaria*; in *Stenoma* "the anterior wings are broad before the middle, posteriorly narrowed;" in *Depressaria* they are, to use Zeller's words, "almost widened posteriorly," whereas in *Exæretia* they are narrowed beyond the middle and then again expanded; the cilia are much shorter than in *Depressaria*, in this respect resembling *Stenoma*.

Allisella, n. sp. (Pl. XVII. fig. 1.)

Alæ anteriores plumbeæ; striâ rufâ obliquâ à costâ ante medium; maculâ magnâ triangulare rufescente ante apicem, quæ supra costam stat, marginem interiorem suo apice tangens; in margine interiore hujus maculæ, quæ distinctior est, stat linea nigra obliqua.

This species is very distinct from any with which I am acquainted, and has at first sight somewhat the appearance of a *Peronea*.

Expansion of the wings 10—11 lines.

Head ashy-grey. Face ashy-grey. Palpi, the second joint is on the upper side whitish, smooth; on the under side thickly clothed with ashy-grey bristles; terminal joint dark tawny, not annulated. Antennæ grey. Thorax greyish. Abdomen greyish, with a large black spot in the middle; the anal tuft is yellowish. Legs and tarsi brownish on the outside, whitish inside. Anterior wings rather glossy leaden grey, with a rosy tint at the base toward the inner margin; a little before the middle is a short oblique rosy streak proceeding from the costa, and reaching only half across the wing, it terminates in a darker spot; parallel to this, a little beyond the middle, is a similar streak which reaches to the anal angle, and has in it a short black linear blotch; beyond this streak the entire apical portion of the wing is more or less suffused with reddish, and a darker shade proceeds from the anal angle to the apex, forming the outer side of the triangular blotch; the portion of the disk immediately following the black spot is

rather paler than the surrounding portion; before the commencement of the cilia is a dark marginal line; cilia at their origin grey, at their termination greyish-rufous, darkest round the apex of the wing. Posterior wings greyish, with dark marginal line before the paler cilia.

I have named this species after my friend Mr. Allis, who, at my request, most readily forwarded to me his specimens to be described. I mention this circumstance as some collectors have a dislike to parting with their specimens, however much they may be required for the furtherance of science; such persons may have fine collections, but can surely not expect to be considered scientific entomologists.

Three of Mr. Allis's specimens were taken in Yorkshire, near Rotherham, in June or July, and another on the coast, near Maryport, Cumberland.

DEPRESSARIA, Haw., St., Z.

HÆMYLIS, Tr., D.

Sp. 1. *Costosa*, Haw., St.

Depunctella, Podev., Hüb. 378., Tr., D., Z.

Yeatsana, St.?

Spartiana (*Tortrix*), Hüb. 199.

Distinguished from the somewhat similar *assimilella*, by the rufous cilia of the anterior wings.

This species is common in July and August among furze-bushes.

Sp. 2. *Liturella*, W. V., Tr., D., Z.

Sparmanniana, F., St.

Flavella, Hüb. 97.

Flavosa, Haw.

The larva of this species feeds on *Centaurea jacea*, in May. The perfect insect appears in July.

Sp. 3. *Pallorella*, Zeller. (Isis, 1839, S. 195.)

Very closely allied to the preceding, but distinct. Instead of the blotch near the anal angle, and the short streak towards the base, near the inner margin of that species, these two marks are here united into a continuous, rather stout line; at the base, just above the inner margin, is a distinct black spot, and in the apical portion of the wing the nervures are much more distinctly marked.

A scarce species; hitherto perhaps much neglected from being confounded with *liturella*. Mr. Weir took a specimen at Lewes,

last September, from reed thatch; one was taken near Lewes the previous autumn. Mr. Maitland took one at sugar, in the Isle of Wight, in September, and Mr. Ingall took it at Mickleham.

Sp. 4. *Ulicetella*, Stainton.

Umbellaram, Haw.

Umbellana, St. (non F.)

Distinguished from all its congeners by the radiating brown streaks on the straw-coloured anterior wings.

Not uncommon in this country among furze bushes in August; it appears totally unknown on the continent.

Sp. 5. *Assimilella*, (Tis.) Tr., F. v. R., D., Z.

Atomosa, Haw.

Irrorella, St.

Atomella, St.?

At once distinguished from *costosa*, with which it is sometimes placed, by the yellowish colour of the cilia of the anterior wings; in *costosa* they are rufous.

I took three specimens of this insect in a broom-field near Airthrey (in the neighbourhood of Stirling), July 15th and 16th, 1848.

The species has also been taken by Mr. Weir, at Tunbridge Wells; by Mr. Sircom and others.

The larva feeds, according to Fischer von Roslerstamm, on *Spartium scoparium* only, and is to be found from the beginning of April to the middle of May.

Sp. 6. *Nanatella*, nov. sp. (Pl. XVII. fig. 2.)

Alæ anteriores *breves*, *obtusæ*, pallidè ochraceæ, irroratæ numerosis atomis fuscis, quarum duæ longitudinaliter positæ conspicuiore sunt.

Allied to *assimilella*; anterior wings shorter and the apex less pointed; the colour of the anterior wings is paler ochreous, irrorated with fuscous atoms, two of which, near the middle of the wing, are conspicuous from their size; these are placed longitudinally, that nearer the base being the larger; there is but faint indication of a shoulder mark, and the dark blotch of *assimilella* is entirely wanting.

Expansion of the wings $6\frac{1}{2}$ — $7\frac{1}{2}$ lines.

Head very pale ochreous. Face rather paler. Palpi pale ochreous, the second joint with ochreous bristles beneath, terminal joint not annulated. Antennæ fuscous. Thorax very pale ochre-

ous. Abdomen fuscous, with the sides and apex ochreous. Legs pale ochreous, the first pair anteriorly brown. Tarsi pale ochreous, spotted with brown. Anterior wings very pale ochreous, with numerous fuscous atoms; towards the hinder margin is darker shade, arising near the anal angle and reaching nearly to the costa; nearly in the middle of the wing are two or three black spots, placed longitudinally, of which that nearest the base is generally the largest; cilia pale ochreous, with a darker line running right through them from the apex to the anal angle. Posterior wings griseous, darkest towards the apex, with paler cilia, in which, close to the margin of the wing, is a dark line.

Mr. Douglas took two specimens of the insect in Charlton sand-pit, among the herbage, on the 12th of August, 1846. Mr. H. Doubleday has also a specimen.

Sp. 7. *Atomella*, W. V., Hübn. 240, Z.

Pulverella, Tr., F. v. R. pl. 32, f. 2.

Var. *Respersella*, Tr., F. v. R. pl. 33, f. 1.

This species is, according to Fischer, extremely variable; in this country it has hitherto been so scarce that we have no opportunity of judging of its liability to vary. It is not *very closely* allied to any other species, and is distinguished by the roundness of the apex of the anterior wings, and ordinarily by the pale costa. Mr. Stephens has one concolorous pale specimen, in which, of course, this latter character is wanting.

I am indebted to the liberality of Mr. Weir for the possession of this species; he bred it from larvæ taken near Tunbridge Wells, by sweeping in June, the perfect insect appearing July 20 and 21, 1848. He likewise took two by mothing, Aug. 16, 1847. Fischer informs us that the larva feeds on *Spartium scoparium*, *Genista Germanica*, and *tinctoria*, in May and June.

Sp. 8. *Arenella*, W. V., Tr., F. v. R., D., Z., Ev., Lie.

Gilvella, Hb. 96, St.

Gilvosa, Haw.

Var. *Immaculana*, St.

A common species, and generally distributed; appearing in July and August, and hibernated specimens occurring in the spring.

Mr. Stephens's specimen, described by him as *immaculana*, is merely an extraordinary variety of this species; it is very far from being "*totally immaculate*."

The larva feeds, according to Zincken (see Treitschke), on *Centaurea scabiosa* and *Sonchus Carolina*; according to Lienig, on *Centaurea jacea*.

Sp. 9. *Propinquella*, Tr., F. v. R., Z., Ev.
Gilvosa, var. β . Haw.

Till this year scarce in this country; it has now been taken in some plenty by Messrs. Bedell, Douglas, and Weir, the greater part of the specimens being beat out of thatch in August and September.

There is a variety of this species in which the fuscous blotch is obliterated.

Sp. 10. *Subpropinquella*, nov. sp. (Pl. XVII. fig. 3.)

Alæ anteriores elongatæ, apice obtuso, ochraceæ, punctis duobus nigris obliquè positis ante et maculâ fuscâ, rarè distinctâ, pone medium.

Allied to *propinquella*, but the anterior wings are much longer, nearly as long as in *arenella*, but considerably narrower; the apex is slightly rounded; the colour of the anterior wings is brownish ochre mottled, as in the darker parts of *propinquella*; there is very slight (indeed, hardly perceptible) appearance of a shoulder mark; before the middle are the ordinary two black spots, and above the upper one is generally a third smaller one; beyond these is a large fuscous blotch (rarely as prominent as in *propinquella*); and obliquely to this, a similarly coloured smaller blotch or spot.

Expansion of the wings, 8—9 lines.

Head ochreous. Face very pale ochreous. Palpi pale ochreous; the second joint beneath with ochreous bristles; the terminal joint with two brown rings, one near the base, the other towards the apex. Antennæ fuscous. Thorax ochraceous. Abdomen griseous. Legs pale ochreous. Tarsi, anterior pale ochreous, spotted with fuscous; posterior darker, unspotted. Anterior wings described above; cilia pale ochreous; posterior wings pale griseous, with paler ciliæ, in which is a darker line near the margin of the wing.

This species has been taken by Mr. Bond (to whom I am indebted for it), who beat it out of thatch in Cambridgeshire this autumn.

Duponchel's figure of *Heracliella* (pl. 290, f. 12) accords better with this species than with a continental specimen of *laterella*, which I have before me; but his description is too vague to throw any light upon the figure.

- Sp. 11. *Alstræmeriana*, L. (S. N.), St., Z.
Alstræmiana, L. (F. S.), F.
Alstræmeri, Haw.
Alstræmerella, Tr., D.
Monilella, W. V.
Puella, Hüb. 82.
Albidella, Ev.

Not very common; occurring in April and August. The larva has not yet been observed.

- Sp. 12. *Purpurea*, Haw., St.
Vaccinella, Hüb. 416, Tr., D., Z.

Not generally common; taken in some plenty by Mr. Weir out of thatch in August and September. The larva is still unknown.

- Sp. 13. *Caprella*, nov. sp. (Pl. XVII. fig. 9.)

Parva; alæ anteriores griseo-rufæ, punctis duobus nigris obliquè positis ante medium, et pone medium punctis duobus albis, longitudinaliter positis.

Allied to *capreolella* and *purpurea*; larger than *purpurea*, less rosy, without the conspicuous blotch of that species, with two black spots placed obliquely to one another, and then two white spots placed longitudinally; smaller than *capreolella*, and the anterior wings less plain grey, more suffused with reddish.

Expansion of the wings 6 lines.

Head reddish grey. Face paler. Palpi pale grey, the terminal joint somewhat ochreous, with a brownish spot on its inner side, before the apex. Antennæ fuscous. Thorax reddish-grey. Abdomen fuscous, with the anal tuft rather ochreous. Legs pale ochreous. Tarsi reddish-grey, with the ends of the joints paler. Anterior wings narrow, reddish-grey, with the shoulder pale, and the costa also paler than the ground colour of the wing; the two black spots are placed obliquely as in *purpurea*, but have not the pale blotch near them; they are followed by two white spots as *purpurea*, but the large black blotch towards the costa of that species is here entirely wanting; cilia reddish-grey, preceded by a row of black dots. Posterior wings griseous, with paler cilia, in which a darker line runs round the margin of the wing.

For this species I am indebted to Mr. Weir, who took two near Lewes, from thatch, in September, 1848; Mr. Maitland has also taken the species at Ventnor.

† Sp. 14. *Capreolella*, Zeller (Isis, 1839, s. 196).

Taken by Zeller in April, in corn fields, and thus briefly described: "little larger than *vaccinella*, with the spots of *applana*, but a brownish-grey clearer ground-colour."

There is a foreign specimen in the British Museum.

Sp. 15. *Hypericella*, Hüb. 441, Tr., D., Z., Lie.

Liturella, Hüb. 83, St.

Liturosa, Haw.

The larva feeds, in June, on *Hypericum perforatum*; the moth appears in July. As yet this is scarce in this country; it is occasionally taken at sugar.

The larva described by Lienig as feeding on willow probably belongs to the next species.

Sp. 16. *Conterminella*, (F. v. R.) Z. (Isis, 1839, S. 196.)

Curvipunctosa, Haw., St.

Though Haworth's name has priority, yet I give the preference to Zeller's name, as his description of the posterior wings at once identifies the species; Haworth's description might possibly apply to a variety of *applana*.

Haworth's variety β , of which Mr. Curtis has a specimen, may prove to be a distinct species. This insect, at first sight, a good deal resembles the preceding; but the posterior wings have no emargination near the anal angle, and the head and thorax are not so bright a yellow as in that species.

The larva feeds on the willow, and also on the osier (*Salix viminalis*), from the tops of which plant they have been obtained in May by Mr. Wing, and the moths reared at the end of June.

When beating for *Pæcilochroma piccana* (Haw.) among willows, in August, I met with some wasted specimens of the perfect insect.

Sp. 17. *Angelicella*, Hüb. 337, Tr., Z., Ev.

Rubidella, D., Hüb. 221?

Readily distinguished from *arenella*, *propinquella*, and other allied species, by its pale unannulated palpi.

This species was taken by Mr. Bond, at Yaxley, in 1845. Mr. Sircom and Mr. Desvignes have each a specimen of their own capturing.

† Sp. 18. *Laterella*, W. V., Z., F. v. R. (Text.)

Heracleiella, Hüb. 417, Tr., D. ? F. v. R. (Fig.), Zett.

Zeller states Hübner's *carduella* to be a variety of this species ; now in this country *laterella* has not yet occurred, whereas a number of specimens of an insect which agrees well with Hübner's figure of *carduella* have been taken at different times : our *carduella* may not be the *carduella* of Zeller, but is decidedly the *carduella* of Hübner, and I should think a very distinct species.

The larva of *laterella* feeds, according to Tischer (see Treitschke), on *Centaurea cyanus*, in May and June, and the moth appears in July. Tischer adds : "*Carduella* is a variety, since I bred from these larvæ two specimens which perfectly agree with Hübner's figure, N. 439."

This species is not uncommon on the continent, and will probably soon be detected in this country.

Sp. 19. *Carduella*, Hüb. 439., St.

Not a common species, but widely distributed. Most of the specimens that have occurred have been in July and August, and several of them at sugar. Mr. Wing took a specimen at sugar, on the Dartford Heath fence, in September.

Sp. 20. *Characterella*, W. V., Tr., Z., Lie., D., Ev.

Ocellana, F., St.

Signella, Hüb. 80.

Signosa, Haw.

This species frequents shallows, on which the larva feeds in July ; the moth appears towards the end of August, and re-appears in the spring. Many of the spring specimens are very fine, and have no appearance of having hibernated ; probably some pass the winter in the pupa state.

† Sp. 21. *Ciniflonella*, (Lie.) Z. (Isis, 1846, S. 280.)

"Alis anterioribus rufescenti-canis, griseo-conspersis, postice et in parte costæ basali canis, lineola ante, lineola annuloque minuto post medium disci nigris." Z. l. c.

Taken by Madame Lienig in Livonia.

† Sp. 22. *Thapsiella*, Z. (Isis, 1847, S. 838.)

"Alis anterioribus obtusiusculis, carneo-griseis, fusco-conspersis ; costa fusco-maculata, punctis duobus ante, puncto ocellari

post medium nigris; palporum articulus terminalis annulo medio et apice fuscis." Z. l. c.

Taken by Zeller in Sicily; the larvæ abundant on *Thapsia garganica*; sometimes 50—60 larvæ on one plant. He bred the perfect insect from April 30th to June 4th; but never saw it at large.

Sp. 23. *Yeatiana*, F. 3, 2, 274.

Yeatsii, Haw.

Putridella, Hüb. 244? Haw.

Distinguished from all its congeners by the glossy pale greyish-purple anterior wings; it is more or less dusted with fuscous; and frequently the nervures of the hinder portion of the wing are darker; it then becomes the *putridella* of Haworth; but Hübner's figure of *putridella*, if meant for this species, is very bad.

Taken rather commonly by some of the collectors at the east end of London.

Sp. 24. *Intermediella*, n. sp. (Pl. XVII. fig. 4.)

Alæ anteriores ad apicem *obtusæ, nec rotundatæ*; ochraceæ, plus minusve rufescentes, atomis fuscis conspersis, punctis duobus obliquè positis ante medium, duobus albis pone medium, et suprâ ea macula fusca.

This forms a connecting link between the group of which *arenella* may be considered the type and *applanata*; the form of the anterior wings is nearly square at the apex, thus very different from *applanata*; the ground colour of the anterior wings is ochreous, or reddish ochreous, interspersed with numerous fuscous atoms;—before the middle are two black spots placed obliquely and beyond them two smaller white ones margined with black, and above these is a fuscous blotch; towards the base is the ordinary dark shoulder mark, which reaches about half across the wing.

Expansion of the wings, 9—9½ lines.

Head ochreous. Face paler. Palpi, second joint, pale ochreous above, beneath rather darker, terminal joint pale ochreous, but with the base, a ring before the apex, and the extreme apex, fuscous. Antennæ fuscous. Thorax ochreous or reddish ochreous, according with the colour of the anterior wings. Abdomen pale ochreous. Legs pale ochreous, the anterior rather darker on the outer side. Tarsi ochreous, rather darker than the legs. Anterior wings described above; a little before the hinder margin is an indistinct angulated fascia, which, from not being

dusted with fuscous, appears paler than the rest of the wing; on the hinder margin itself is a row of fuscous spots; cilia of the colour of the wings, frequently more rufescent at the apex. Posterior wings pale griseous, darker at the apex, with pale yellowish-white cilia.

Taken in the summer of 1847, at West Wickham, by Messrs. Bedell and Douglas, who beat it out of old thatch, sparingly.

I should have been inclined to think this the continental *laterella*, were it not that I have before me a specimen of that insect, obtained by Mr. H. Doubleday from the continent, which agrees precisely with Hübner's fig. 417 (*which Zeller says is very good*), and is a very different insect from our species.

Sp. 25. *Applana*, (Pyr.) F., Haw., St., Z.

Applanella, (Tin.) F., F. v. R.

Cicutella, Hüb. 79, 419, Tr., D., Ev.

The most abundant species in the genus; the hibernated specimens are exceedingly abundant in the first warm evenings of spring.

The larva feeds on various umbelliferous plants, *Cicuta virosa*, *Heracleum sphondylium*, &c., in May and June.

Sp. 26. *Ciliella*, n. sp. (Pl. XVII. fig. 7.)

Major; alæ anteriores rufæ, maculis duabus albis, nigro-cinctis, obliquè positis ante medium; et maculis duabus albis longitudinaliter positis pone medium; alæ posteriores ciliis rufo-variegatis.

Somewhat resembling *applana*, but much larger; the anterior wings generally more uniform in colour, with four white spots; the two first placed obliquely and preceded by black margins, the two others placed longitudinally; the cilia of the posterior wings, instead of being plain, as in *applana*, are marbled with rufous.

Expansion of the wings, 10—11 lines.

Head dark reddish-brown. Face ochreous grey. Palpi, second joint, reddish-brown; internally pale ochreous; last joint reddish-ochreous, with two dark fuscous rings, one at the base, the other before the apex, extreme apex fuscous. Antennæ reddish-brown. Thorax reddish-brown, more or less dark, according to the colour of the anterior wings. Abdomen grey. Legs externally reddish-brown, internally pale ochreous. Tarsi externally reddish-brown, with the ends of the joints paler, internally ochreous, with the base of the joints darker. Anterior

wings variable in colour, from pale reddish-brown to dark fuscous, with but slight reddish tint; base and basal half of the costa generally paler than the rest of the wings; spots as in *aplana*, two black ones placed obliquely before the middle, the posterior one externally margined with white, and beyond them two white ones margined with black, placed longitudinally; on the hinder margin is a row of fuscous spots; cilia rufous-brown. Posterior wings greyish; cilia pale, variegated with rufous towards the end.

This species appears widely distributed: it was beat out of thatch, at West Wickham, in August, 1847, by Messrs. Bedell and Douglas; Mr. H. Doubleday has received it from the Lancashire coast; Mr. Allis meets with it in Yorkshire; and I have a specimen from Stirlingshire.

Sp. 27. *Rotundella*, Douglas, (Zool. 1270, F. 8.)
Peloritanella, Z. (Isis, 1847, S. 837.)

Taken by Mr. Douglas at Mickleham, and Sanderstead, in September, at sugar.

Zeller met with this insect abundantly in Sicily, on mountains near Messina, in April and July. He says, "the larva feeds probably on *Erica arborea*, or *Spartium junceum*."

† Sp. 28. *Parilella*, (F. v. R.) Tr., Z., Lie.
Humercella, Dup. (Pl. 312, f. 7.)

"Alis anticis testaceo-hepaticis, basi punctoque medio flavidis; posticis cinereis." Tr. l. c.

The larva feeds, according to Lienig, in June, on *Athamanta oreoselinum* and *Selinum caruifolium*. The perfect insect appearing in July. Taken, by Mann, on the trunks of birches.

This and the four following species are distinguished by the pale shoulder of the dark-coloured anterior wings.

† Sp. 29. *Ferulæ*, Z. (Isis, 1847, S. 840.)

"Major, fronte patagiisque flavidis, alis anterioribus obtusis brunneis, basi abrupte flavida, puncto nigro ante, albo post medium; palpis flavidis, externe fuscis, articulus terminalis basi annuloque fuscis." Z. l. c.

Zeller met with the larvæ of this species in Sicily, near Messina, on *Ferula communis*, April 15th, and bred from them five specimens in the middle of May.

† Sp. 30. *Furvella* (Pod.) Tr., Z.

“Capite thoraceque flavis; alis anticis pallide hepaticis, basi punctoque medio flavis.” Tr. l. c.

Posterior wings not emarginated at the anal angle (according to Zeller), thus resembling *conterminella*.

Taken in July, in Austria and Hungary; larva unknown.

† Sp. 31. *Cnicella* (Tis.), Tr., F. v. R., Z., D.

“Alis anticis rubro-fuscis vel hepaticis, basi abrupte albido-cinereis, punctis duobus tribusve (rarius uno) disci longitudinaliter positus albis.” F. v. R. l. c.

The larva feeds gregariously in May on *Eryngium campestre*; the perfect insect appears in June.

There are specimens of this in the British Museum.

† Sp. 32. *Hepaturiella* (Lien.), Z. (Isis, 1846, S. 282).

“Palporum articulo terminali ad basim griseo, alis anterioribus badiis (fem. basi abrupte dilutiore), fuscencenti-conspersis, puncto uno duobusve disci mediis albis.” Z. l. c.

Closely allied to the preceding. Taken by Madame Lienig in Livonia in July.

† Sp. 33. *Impurella* (Mtn.), Tr., F. v. R., Z.

“Alis anticis fusco-rufis, dense nigro, fusco albidoque pulverulentis; basi, costa, fascia dimidia ante, fasciaque integra post medium albo-conspersis; puncto medio obsoleto nigro-fusco.” F. v. R. l. c.

Beat out of pine trees by Mann in May and August.

Sp. 34. *Depressana*, (Pyr.) F., Z.

Depressella, (Tin.) F., Hbn. 407, D.

Bluntii, C.

Collarella, Zett. In. Lapp. 999, 6.

A variable species; distinguished not so much by the markings of the wings, for Hübner's figure shows none, as by the pale colour of the palpi, head, and thorax.

The larva is abundant in gardens near Berlin, on the umbels of the carrot and parsnip.

- Sp. 35. *Pimpinellæ*, Z. (Isis, 1839, and Isis, 1846, S. 282.)
Characterosa, Haw.
Pulverella, Ev.?

Var. β ? Major, tarsi omnibus externè rufescentibus.

Allied to the preceding, but larger; the costa broadly red, generally some black spots on the disk, and the underside of the second joint of the palpi is reddish-brown, (in *depressana* it is very pale yellow).

The larvæ is, according to Zeller, abundant near Glogau on *Pimpinella saxifraga*, in August and September.

The perfect insect was taken by Mr. Bedell in September from some old thatch, near the Stoa's Nest Station of the Brighton Railway.

I have only seen one specimen of var. β , which may hereafter prove distinct.

- Sp. 36. *Albipunctella*, Hbn. 149, St., Tr., Z., D., Ev.
Albipuncta, Haw.

Thorax reddish-brown; last joint of the palpi entirely dark fuscous, except the extreme apex, which is whitish.

The larva feeds, according to Treitschke, in May, on *Artemisiæ campestris*. I have often taken the perfect insect at sugar in July and August.

- Sp. 37. *Pulcherrimella*, n. sp. (Pl. XVII. fig. 8).

Alæ anteriores rufæ, numerosis striis atris, striâ obliquâ atrâ ante, puncto albo pone medium; caput thoraxque pallida; palporum articulus terminalis intus pallidus, puncto fusco basi, alteroque ante apicem; articulus secundus infrâ rufo-brunneus.

Allied to *albipunctella*, but the head and thorax are pale; the inner side of the palpi is pale, with a dark spot at the base, and another before the apex; the pale hinder fascia on the anterior wings is more angulated; and the black streaks on the disk are always more distinct than in *albipunctella*. In some specimens, after the black spot, is a white streak, reaching nearly to the white spot.

Expansion of the wings $6\frac{1}{2}$ —7 lines.

Head pale ochreous-grey. Face pale ochreous-grey. Palpi; the second joint pale ochreous-grey above, beneath reddish-brown; terminal joint externally dark fuscous, except the apex,

internally pale ochreous, with a dark spot at the base, and another before the apex. Antennæ fuscous. Thorax pale ochreous-grey, with the sides reddish-brown. Abdomen greyish, the anal tuft ochreous. Legs, internally greyish-ochreous, externally reddish-brown. Tarsi internally ochreous, with the bases of the joints darker; externally reddish-brown, with the ends of the joints paler. Anterior wings reddish-brown, with a very pale dash at the base of the inner margin; scattered over the disk are numerous black scales, which frequently form short streaks; before the middle is a short oblique black streak, sometimes followed by a straight white one; beyond the middle of the wing is a distinct white spot as in *albipunctella*; and between this and the hinder margin is a pale angulated fascia; at the hinder margin is a row of fuscous spots; cilia pale reddish-brown. Posterior wings pale grey, with paler cilia.

This species is taken not very uncommonly at Sanderstead Downs, in July, being beat out of the juniper bushes, which form a sort of universal shelter for all the minute *Lepidoptera* that occur on the Downs.

The larva most probably feeds on some umbelliferous plant.

Sp. 38. *Douglasella*, n. sp.

Alæ anticæ sordidæ brunneæ, numerosis atomis albis irroratæ; obtusæ; caput thoraxque albida; palporum articulus secundus infrà griseus.

Closely allied to the preceding; but the anterior wings are less pointed at the apex; the head and thorax are greyish-white (nearly white), with no admixture of ochreous; the second joint of the palpi is underneath grey, not reddish-brown; and the tarsi are externally dark fuscous, with no admixture of reddish; the ends of the joints paler, as in *pulcherrimella*; the colour of the anterior wings is much darker, more fuscous than in *pulcherrimella*, and with more numerous white atoms.

Mr. Weir took a specimen of this in the south of England, and Mr. Maitland has likewise taken it.

Sp. 39. *Weirella*, n. sp. (Pl. XVII. fig. 5.)

Alæ anteriores rufo-brunneæ, puncto fusco albido-cincto paululum ante medium, punctis duobus parvis fuscis ab atomo albo separatis, pone medium; palporum articulus terminalis pallidè ochraceus, annulo fusco ante apicem.

Larger than the two last; allied to *albipunctella*, but *without the*

white spot on the anterior wings, in place of which two very small, pale fuscous spots are visible; the pale fascia is more angulated, resembling that of *pulcherrimella*; the row of black spots is less distinct than in *albipunctella*; posterior wings paler.

Expansion of the wings $7\frac{1}{2}$ lines.

Head greyish-brown. Face rather paler. Palpi; second joint pale ochreous above, greyish-brown beneath; terminal joint *pale ochreous*, with a *single* fuscous ring before the apex. Antennæ fuscous. Thorax greyish-brown; the sides dark reddish-brown. Abdomen greyish, with the anal tuft ochreous. Legs externally reddish-brown, internally pale ochreous. Tarsi dark fuscous, with the ends of the joints paler. Anterior wings dark reddish-brown; a little before the middle is a fuscous spot surrounded by whitish; and a little beyond the middle are two small fuscous spots separated by a white atom; before the hinder margin is a very faint, pale angulated fascia; and on the hinder margin are a few fuscous spots; cilia pale reddish-brown. Posterior wings whitish-grey, with paler cilia.

Mr. Weir has two specimens, taken in Sussex, probably at sugar, near Brighton.

Sp. 40. *Chærophylli*, Z. (Isis, 1839, S. 196.)

Badia, Haw.

Badiella, St.

Heracleana, F.?

Zeller states that he has bred this insect in plenty from larvæ found on *Chærophyllum bulbosum*. I have taken several of this in July and August at sugar.

Its larger size, and the ochreous basal patch on the costa, readily distinguish it from the following.

Sp. 41. *Ultimella*, n. sp. (Pl. XVII. fig. 6.)

Alæ anticæ angustæ, striis numerosis atris, posteriorè fasciâ pallidâ acutè angulatâ; punctis duobus albis fusco-cinctis in medio.

Allied to *chærophylli*, but smaller, and the pale fascia more angulated; also destitute of the ochreous shoulder of *chærophylli*, with the central portion of the wing marked as in *nervosa*, from which species this is distinguished by its size, and much narrower anterior wings.

Expansion of the wings $7\frac{1}{2}$ lines.

Head reddish-ochreous. Face pale ochreous. Palpi, second joint, pale ochreous above, beneath reddish-brown; terminal joint pale ochreous internally, with a dark fuscous spot before the apex, externally rather dark, with the dark spot before the apex, the apex itself pale. Antennæ fuscous. Thorax pale reddish-ochreous. Abdomen griseous, anal tuft pale ochreous. Legs pale ochreous internally, externally darker. Tarsi pale ochreous internally, externally reddish-brown, with the ends of the joints paler. Anterior wings dull reddish-brown, with numerous short longitudinal black streaks, which are thickest on the costal half of the wing; a little before the hinder margin these form the outer edge of an extremely angulated fascia, beyond which the apical portion of the wing is entirely fuscous; a little before the middle of the wing is a black spot margined with whitish, and immediately beyond it is another likewise margined with whitish; cilia pale reddish-brown. Posterior wings grey, with paler cilia.

Taken by Mr. Weir near Lewes, in September, 1848, by beating thatch.

This may perhaps be the *apiosa* of Haworth. I know no other that will at all answer his description of "puncto exactè in medio, minutissimo, niveo, fusco-cincto."

Sp. 42. *Nervosa*, Haw., St.

Daucella, Z. (*Isis*, 1839, S. 196), Tr.? W. V.?

Recognized at once by the extremely angulated fascia of the anterior wings, and its concolorous glossy appearance.

Taken in plenty by Mr. Weir this autumn from thatch, in the neighbourhood of Lewes: Mr. E. Shepherd also took the insect at Weybridge.

This must be the *daucella* of Zeller, from the character of the fascia, yet he gives *apiella*, Hübner, as a synonyme, which is a much darker insect, and appears to me identical with *badiella*.

† Sp. 43. *Emeritella*, Heyden, (Mann's Cat.)

This very distinct species has not yet, I believe, been described. It has some resemblance to *albipunctella*, but is much larger, and the head, palpi, and centre of the thorax, are bright ochreous yellow.

There are specimens of it in the British Museum.

Sp. 44. *Badiella*, Hbn. 92, Tr., Z., Ev.

Apicella, St.

Apiella, Hüb. 94?

Pastinacella, Dup. pl. 291, f. 5 (not 4).

Var. β . Palporum articulo secundo infra ochraceo, nec fusco. Not uncommon among the juniper bushes near Sandersted in August.

Of var. β I have a specimen; and Mr. Bedell has another, taken at the same time and place with the ordinary variety.

Sp. 45. *Pastinacella*, Dup. XI. 153, pl. 291, f. 4 (not 5).

Variable in shade of colour, generally grey; sometimes almost as dark as the preceding; but the anterior wings are narrower. In the middle of the wing are two ocellated markings, much more distinct than in *nervosa*.

Duponchel's figure has a reddish tinge, which I have not observed in any of the specimens I have seen. I have no doubt that this was the species sent by Fischer to Duponchel, his observation, quoted by the latter, being so very applicable:—"This was taken at first for a pale variety of *badiella* of Hübner; but M. Zeller has reared several hundred specimens from the larva which feeds on *Pastinaca sativa*, and has not obtained a single one as dark as that figured by Hübner, and which we take sparingly here and there."

Though Duponchel was thus aware that this insect was very like *badiella*, with which insect he was not acquainted, yet he did not hesitate to figure as the other sex of *pastinacella*, a specimen which he had obtained from the Department du Nord, which differs considerably from his other figure, and which I have no hesitation in pronouncing a veritable *badiella*.

† Sp. 46. *Veneficella*, Z. (Isis, 1847, S. 842.)

"Major, alis anterioribus elongatis, rotundatis, brunneo-griseis, linea disci fusca longitudinali, partim pallido-squamata, lineolis ante apicem fuscis; abdomine ciliato, palporum articuli terminalis basi annuloque fuscis." Z. l. c.

Taken by Zeller near Syracuse; the larvæ plentiful in April and May on *Thapsia garganica*. His specimens emerged from the pupa from the 20th of May to the 5th of June. He found only one specimen of the perfect insect at large.

- Sp. 47. *Heracleana*, De Geer, II. 1, 294, Z., St.
Heraclei, Haw.
Umbellana, F.

A common species; the larva plentiful in June and July on *Heracleum sphondylium*, from which I have myself bred it.

Linnæus appears to have had a confused notion of his *heracleana*, since he says in the *Fauna Suecica*:—"Hujus plures species apud nos sunt, quæ magnitudine differunt, sed notis specificis non facile distinguuntur." The *heracleana* of the Linnæan Cabinet is, as observed by Haworth, a specimen of *applanata*.

- † Sp. 48. *Dictamnella*, F. v. R., Tr., Z., D.

The largest species of the genus, and most distinct. It occurs in Hungary, and the larva feeds on *Dictamnus albus* in June.

SUPPLEMENTAL NOTE.—I have now concluded the enumeration of the species which are known and described by recent authors, and will now just refer to two species, which appear to have escaped the observation of the present generation of collectors. In the first place, there is the *rutana* of Fabricius, which is evidently a *Depressaria*. "Alæ depressæ fuscæ, lineolis abbreviatis, numerosissimis, tenuissimis, transversis, albis. Præterea puncto duo parva, elevata, approximata, atra in medio." F. 3, 2, 287. "Habitat in Galliæ Ruta, cujus folia contorquet." And secondly, the *zephyrella* of Hübner (not of Stephens), whose figure is copied by Wood, No. 1193. Treitschke gives this as a synonyme of his *zephyrella*, which Zeller unhesitatingly gives as a synonyme of *terrella*, but has not given *zephyrella*, Hübner, as a synonyme, nor given any reason for omitting it. Hübner's figure resembles no *Gelechia* that I know, and has much more the appearance of a *Depressaria*.

The *Hæmylis Lefebrieriella* of Duponchel, pl. 290, fig. 11, is not a *Depressaria*; it is the *Ræsterstammia Heleniella* of Zeller, the *Acrolepia autumnitella* of Curtis, and the *Tortrix (Eupæcilia, St.) pygmcæana* of Haworth and Stephens.

As so many of our entomologists are in possession of Wood's *Index Entomologicus*, the figures in which are mostly very good (but from the defective nomenclature, the work has now become

comparatively useless), I here give the true names of the insects of this group figured in Wood's Plate 38:—

- No. 1162.....*Sparganiellus* (good).
 1163.....*Heracleana* (too grey).
 1164.....*ulicctella* (good).
 1165.....*ulicctella* (not good).
 1166.....*nervosa* (not good).
 1167.....*nervosa* (good).
 1168.....*badiella* (good).
 1169.....*chærophylli* (good).
 1170.....*carduella* (middling).
 1171.....*arenella* (paler than ordinary specimens).
 1172.....*liturella* (good).
 1173.....*costosa* (not good).
 1174.....*arenella* (var.)
 1175.....*characterella* (good).
 1176..... }
 1177..... } *applana* (good).
 1178..... }
 1179.....*Alstræmeriana* (good).
 1180.....*ultimella*? (not bad).
 1181.....*A Peronea*.
 1182.....*costosa* (good).
 1183.....*assimilella* (good).
 1184.....*Hypericella* (good).
 1185.....*depressana* (good).
 1186.....*purpurca* (not very good).

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XXXIV. *On the British Species of the Genus Gelechia of Zeller. By J. W. Douglas, Esq.*

[Read December 4th, 1848.]

For many years the *Micro-lepidoptera* of Britain have been greatly neglected, and a great confusion of names has arisen. Since the publication of the works of Haworth and Stephens there has been no systematic attempt to identify either our named or unnamed species with those known on the continent, notwithstanding that, in the *Isis* of 1839, Zeller has described and enumerated a great number. I have been requested to bear a part in helping to elucidate "this Babel called *Micro-lepidopterology*," as M. Guénéé says; and if occasionally I should wander from the right path in the mazes of synonymy, it will be more from the difficulty of seeing my way, than from want of endeavour to find it.

The genus *Gelechia* of Zeller is about equivalent to *Lita* of Treitschke, and includes the greater part of the genus *Anacampsis* of Curtis, and the whole or portions of the genera *Recurvaria*, *Che-*